



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/723,460      | 11/26/2003  | Louis G. Kovach II   | 021755-000500US     | 5953             |
| 20350           | 7590        | 06/28/2005           |                     | EXAMINER         |
|                 |             |                      |                     | MCLOUD, RENATA D |
|                 |             |                      | ART UNIT            | PAPER NUMBER     |
|                 |             |                      |                     | 2837             |

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/723,460             | KOVACH ET AL.       |
| Examiner                     | Art Unit               |                     |
| Renata McCloud               | 2837                   |                     |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 26 November 2003.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-20 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 26 November 2003 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/12/04, 04/13/05.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Response to Amendment*

1. The Declaration under 37 CFR 1.132 filed 13 April 2005 was received.

### *Drawings*

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are very informal making them unclear and difficult to read. For example, in 3a, it is unclear if it is a (0) or an (o) near the control knob (312). It is also unclear what the item is pointing the (0)/(o). It appears to be a (314), but it is unclear. Fig. 3B has some unclear writing between the boxes (305) and (359). Fig. 2 appears to have a line/pointer extending from (6) to (4). Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "control wheel" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claims recite, "control wheel" whereas the detailed description of the specification recites, "control knob".

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite the limitation "control wheel", whereas the specification describes a "control knob". Although the brief summary of the invention describes a "control wheel", but the description is not enabling.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "multiplying a distance of rotation of the wheel by a factor based upon speed of knob rotation" is not described in the specification.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-20: The claims recite the limitation "control wheel" whereas the detailed description and the drawings describe a "control knob". In broadly interpreting the limitations, a "wheel", is not the same as a "knob". It is unclear what applicant is claiming.

Claim 14 recites the limitations "the factor" and "the speed of knob rotation". There is insufficient antecedent basis for this limitation in the claim.

Claims 15-18 recite the limitation "the knob". There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Hass (US 6179105), and further in view of CUI Inc.

**Claim 1:** Hass teaches a method comprising providing a rotating control wheel; determining a speed of the wheel over a period (col. 4:6-16, col. 3:59-63); correlating the magnitude of power provided to the vehicle with a speed of the rotation of the wheel (col. 4: 26-39, Col. 4:59-5:5). Hass does not teach a period of about 50 ms or less. CUI Inc teaches an encoder with a frequency response of 500 Hz (see electrical specifications). It would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the apparatus taught by Hass to use the encoder taught by CUI Inc in order to sample the speed over a period of 50 ms or less.

**Claim 12:** a rotating control wheel; an encoder (7) determining a speed of the wheel over a period (col. 4:6-16, col. 3:59-63); a processor (6) correlating the magnitude of power provided to the vehicle with a speed of the rotation of the wheel (col.4: 26-39, Col. 4:59-5:5). Hass does not teach a period of about 50 ms or less. CUI Inc teaches an encoder with a frequency response of 500 Hz (see electrical specifications). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Hass to use the encoder taught by CUI Inc in order to sample the speed over a period of 50 ms or less.

***Hass and CUI teach the limitations of claims 1 and 12. With respect to claims 2-11, 13-18 and 19 Hass teaches:***

**Claims 2, 13, and 14:** correlating the power with a speed of rotation comprises multiplying a distance of rotation of the wheel by a factor determined from a time of wheel rotation (col. 4: 4-16, it is known that speed is a distance over time, so the factor would be  $1/t$ ).

**Claims 3:** the speed is determined when the wheel rotation exceeds 200ms/rotation (col. 4:4-16,col. 6:7-22 the speed is determined over several periods).

**Claim 4:** the factor is proportional to the speed (col. 4: 4-16).

**Claim 5:** correlating the power comprises generating pulses based on the wheel rotation (col. 3:59-63)

**Claims 6-8,15-18:** generating pulses with an encoder (col. 3:36-44)

**Claim 9:** controlling polarity change of the velocity based on the phase difference between voltage signals output by optical detector positioned along a disk rotational path (col. 3:36-44,col. 4:59-5:5, it is known that an encoder functions this way).

**Claim 10:** correlating the magnitude of power to a rail of a model train set (col.3: 29-36).

**Claim 11:** powering a remotely controlled train (col. 3:29-36, Fig. 2:6, the controller is remotely positioned away from the train).

**Claim 19:** a wired communications link (col. 1:4-7) between the power source (Fig. 2:5) and the processor (Fig. 2:6).

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hass and CUI as applied to claim12 above, and further in view of Behun et al (US6529139)

**Claim 18:** Hass and Cui teach the limitations of claim 12. Referring to claim 18, they do not teach an antenna. Behun et al teach an antenna for communication between a power source and a processor (Fig. 11). IT would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Hass and CUI to use an antenna as taught by Behun et al in order to allow a user to control the apparatus from different locations.

***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2800 ext. 4. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Renata McCloud  
Examiner  
Art Unit 2837

RDM

  
MARLON T. FLETCHER  
PRIMARY EXAMINER